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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,737	03/23/2004	Noriya Hayashi	080542-0165	4615

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FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
GRAY, JILL M	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
10/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/807,737	HAYASHI ET AL.	
	Examiner	Art Unit	
	Jill M. Gray	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) *7-42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The rejection of claims 1-3 under 35 U.S.C. 112, second paragraph is moot in view of applicants' amendments and arguments.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-6 and 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dexheimer 6,706,844 B2 in view of Uchida 5,545,697, for reasons of record.

Dexheimer and Uchida are as set forth previously. Regarding the language of "wherein the prepeg is obtained by carrying out semi-curing while keeping the matrix resin composition at a temperature lower from the curing temperature by at least 10° C", this language is drawn to process limitations in a product claim. Patentability of a product relies on the product per se and not the process of making, in the absence of clear factual evidence to the contrary. Applicants are invited to provide such evidence.

Accordingly, the teachings of Dexheimer and Uchida would have rendered obvious the invention as claimed in present claims 1-6 and 43-48.

1. Claims 1-6 and 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al, 6,399,199 B1, (Fujino), taken alone or alternatively in view of European Patent Publication EP 367,014 (hereinafter Shimizu).

Fujino teaches a prepeg for carbon fiber reinforced plastic, which comprises a matrix resin containing an isocyanate of the type contemplated by applicants, a polyol,

and a bifunctional chain extender, as required by applicants in claims 1-6 and 43-48. See abstract and column 21, line 48 through column 22, and line 9. Fujino is silent as to the specific molar ratios of each component. In this regard, it is the examiner's position that since the results sought and the ingredients used were known, it was within the expected skills of one having ordinary skill in this art to arrive at the optimum proportion of those ingredients. Accordingly, the proportions of ingredients would have been obvious to a person having ordinary skill in the art at the time the invention was made. *In re Reese,* 129, USPQ 402 (CCPA 1961).

In the alternative, Shimizu teaches an elastomeric polyurethane resin composition comprising a bifunctional diisocyanate, a polyol and a bifunctional chain extender, wherein the molar ratio of the functional groups of the diisocyanate, polyol, and chain extender is 2.00-1.10:1.00:1.00-0.10. See abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the molar ratio of the functional groups of the diisocyanate, polyol, and chain extender of Fujino, in forming a polyurethane that would result in a composition having enhanced elastic modulus without lowered tensile strength, whereby the teachings of Shimizu would have provided motivation to the skilled artisan to use a molar ratio within the claimed range, based on his teachings of polyurethane elastomers having shape memory properties. Regarding the language of "wherein the prepeg is obtained by carrying out semi-curing while keeping the matrix resin composition at a temperature lower from the curing temperature by at least 10° C", this language is drawn to process limitations in a product claim. Patentability of a product relies on the product per se and

not the process of making, in the absence of clear factual evidence to the contrary. Applicants are invited to provide such evidence.

Therefore, the teachings of Fujino taken alone and alternatively, in view of Shimizu would have rendered obvious the invention as claimed in present claims 1-6 and 43-48.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/492,940. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application fully encompasses claim 1 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

4. Applicant's arguments filed July 10, 2007 have been fully considered but they are not persuasive.

Applicants argue that the present invention has an elasticity that will lead to an excellent shape memory property.

In this regard, the present claims do not require a prepeg having shape memory properties. The declaration has been fully considered and found to be insufficient to overcome the prior art rejections. In particular, the declaration indicates that experiments where conducted, but does not provide the experimental procedure, i.e. the specific procedural steps and ingredients used and how these steps/ingredients correspond to that set forth in the specification. Also, there is no clear back-to-back comparison of the present invention and the prior art.

No claims are allowed.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jill M. Gray
Primary Examiner
Art Unit 1774

jmg